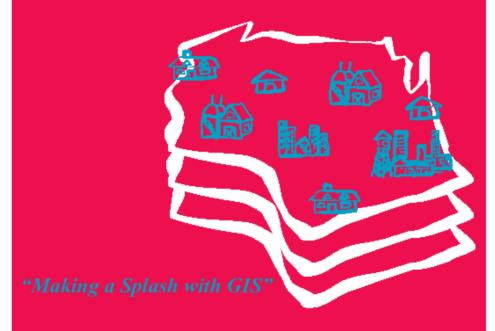
Wisconsin Land Information Association 2004 Annual Conference

Preliminary Program



March 3 - 5, 2004 Kalahari Resort & Convention Center Wisconsin Dells, Wisconsin

Workshop 7:

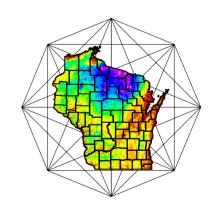
State Agency
Resources for
Comprehensive
Planning

DOA Geospatial Data, Metadata, Demographic Data, & Resources for Comprehensive Planning

Jerry Sullivan, GIS Data Specialist



101 East Wilson Street, 10th Floor Madison, Wisconsin 53707-7844 jerry.sullivan@doa.state.wi.us



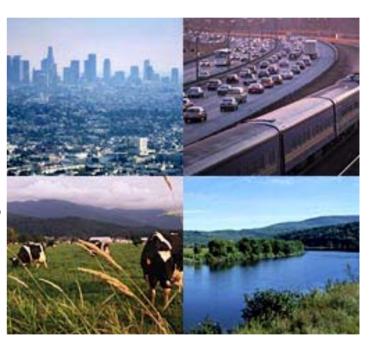
DOA Geospatial Data, Metadata, Demographic Data, & Resources

- TIGER derived County & Statewide Shapefiles
- Demographic Data from DOA, Census, APL
- Address Geocoded Businesses
- Internet Map Servers Directory, WLIS Core Node
- WLIP County LIO Plans & Annual Surveys
- Links to partners: SCO, Wisclinc, DNR / Geo

Contents of a Comprehensive Plan

NINE ELEMENTS OF A COMPREHENSIVE PLAN

- 1. Issues and Opportunities
- 2. Housing
- 3. Transportation
- 4. Utilities & Community Facilities
- 5. Ag, Natural & Cultural Resources
- 6. Economic Development
- 7. Intergovernmental Cooperation
- 8. Land Use
- 9. Implementation



Contents of a Comprehensive Plan

1. Issues and Opportunities Element

Background Information:

- Population Forecasts
- Household Forecasts
- Employment Forecasts
- Demographic Trends
- Age Distribution
- Education Levels
- Income Levels
- Employment Characteristics



Data for a Comprehensive Plan

Data for the Issues and Opportunities Element

Population

Total population

Race and Ethnicity

Foreign born

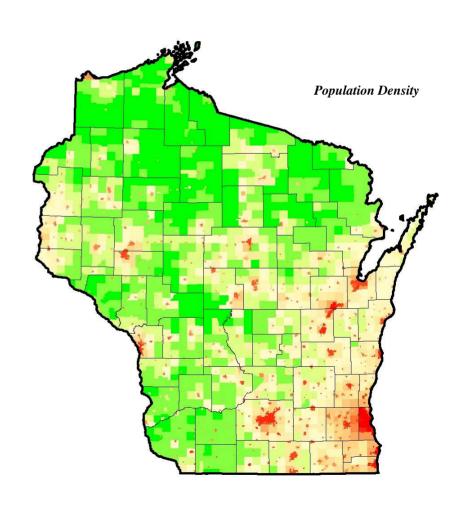
Sex

Age Distribution

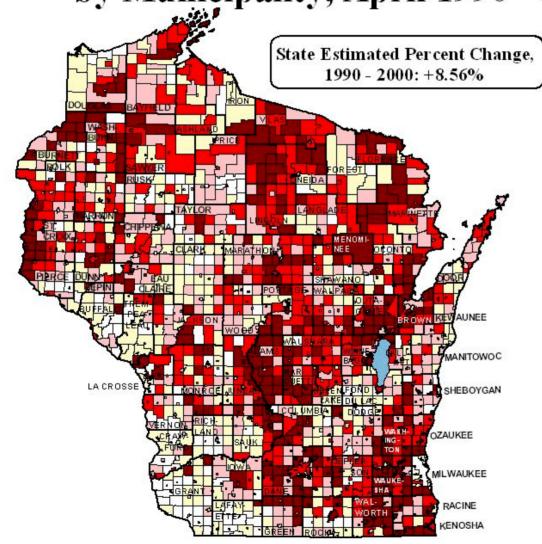
Population projection

Households projection

- Education
- Income
- Poverty Status



Estimated Percent Population Change in Wisconsin, by Municipality, April 1990 - January 2000



Percent Change 1990-2000 Loss or no change 0.01 - 4.10% (1st quartile of positive values) 4.11 - 7.71% (2nd quartile) 7.72 - 13.06% (3rd quartile) 13.07% or greater (4th quartile)

Top Ten Municipalities Greatest Estimated Percent Growth (minimum 250 persons in 1990)

Municipality	County	Change		
Cottage Grove village	Dane	161.54%		
Buchanan town	Outagamie	103.34%		
Brockway town	Jackson	96.97%		
Ledgeview town	Brown	83.35%		
Jackson village	Washington	82.26%		
Sherwood village	Calumet	67.03%		
Nashotah village	Waukesha	66.14%		
Holmen village	La Crosse	61.43%		
Sussex village	Waukesha	59.99%		
Theresa village	Dodge	58.75%		

Sources: WI Demographic Services Center, January 2000 Population Estimates; U.S. Census Bureau, 1990 Census Map prepared by WI Demographic Services Center, October 2000

Contents of a Comprehensive Plan

2. Housing Element





Housing Stock Information:

- Age Characteristics
- Structural Characteristics
- Value Characteristics
- Occupancy Characteristics

Identify policies and programs that:

- Promote development of housing for residents.
- Provide a range of housing choices that meet needs of persons of all income levels, of all ages groups, and persons with special needs.
- Promote the availability of land for development or redevelopment of low-income and moderate-income housing.
- Maintain or rehabilitate local governmental unit's existing housing stock.

Data for a Comprehensive Plan

Data for the Housing Element

Number of Housing Units by Type

Housing Unit Estimate, Housing Tenure

Age of Housing Stock

Number of Rooms in Housing Units

Renter-occupied Housing Units

Household Size and Type

Average Household Size

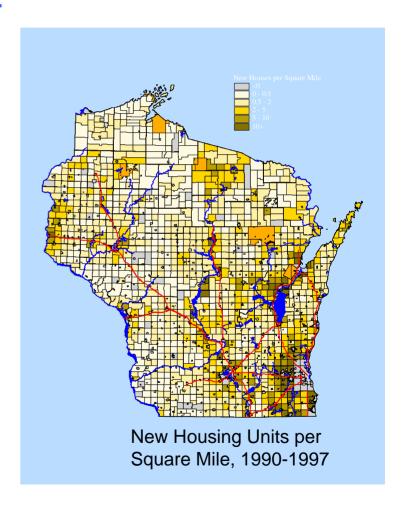
Average Family Size

Family Type and Age

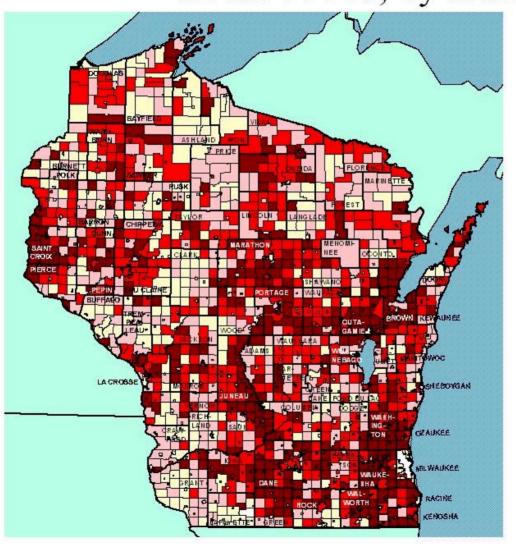
Subsidized and Special Needs Housing

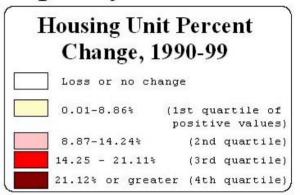
Structural, Occupancy, Value Change

Housing Value, Housing Affordability



Housing Unit Percent Change in the 1990s, by Municipality





Top Ten Municipalities Greatest Percentage Housing Unit Growth (minimum 100 housing units in 1990)

MUNICIPALITY	COUNTY	CHANGE		
Cottage Grove vi lage	Dane	243.94%		
Buchanan town	Outagamie	164.35%		
Ledgeview town	Brown	156.67%		
Nashotah village	Waukesha	140.43%		
Jackson village	Washington	102.75%		
Harrison town	Calumet	96.45%		
Sussex village	Waukesha	88.30%		
Sherwood village	Calumet	84.62%		
Greenville town	Outagamie	84.38%		
Exeter town	Green	83.08%		

NOTE: Change in housing units does not include units gained or lost through annexations.

Source: WI Demographic Services Center Annual Housing Unit Surveys

Data for a Comprehensive Plan

3. Transportation Element



Census data available:

- Time leaving home to go to work
- Travel time to work
- Means of transportation to work
- Private vehicle occupancy





Data for a Comprehensive Plan

4. Utilities & Community Facilities Element

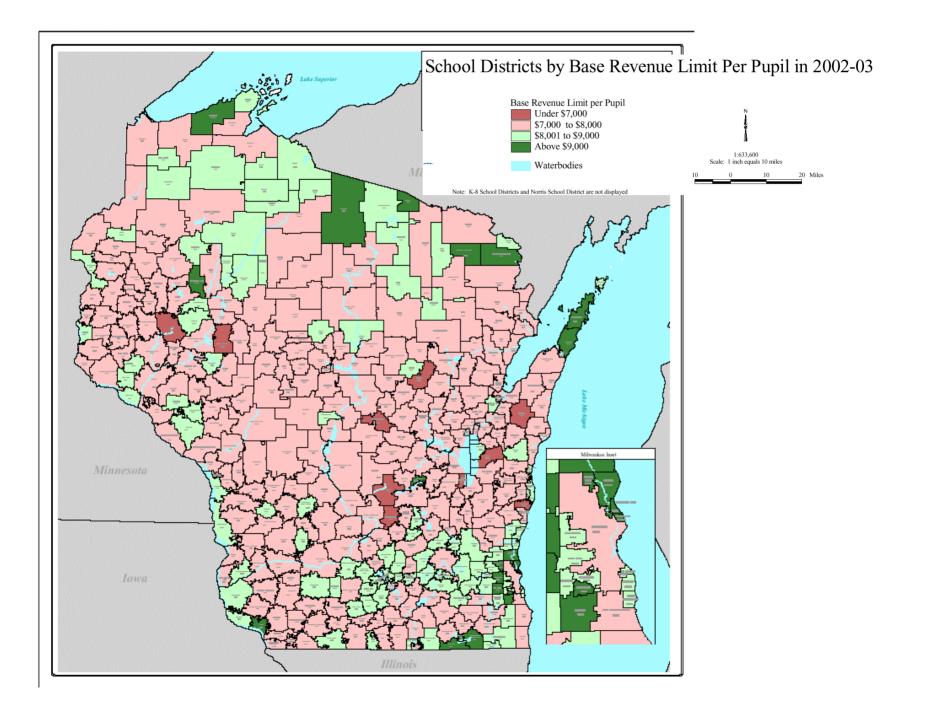
Census data available:

School Enrollment



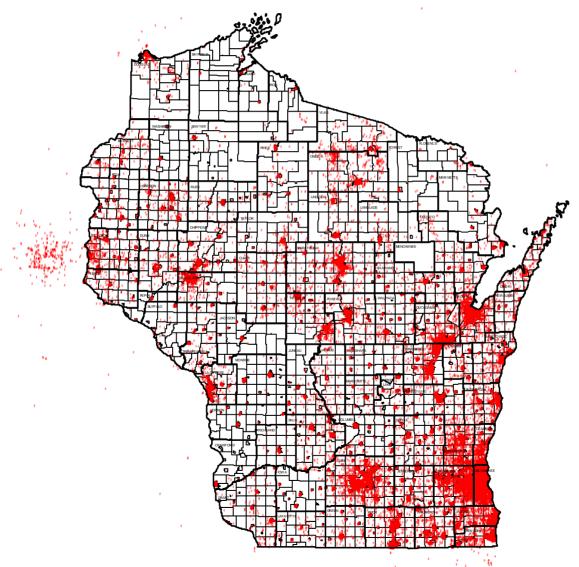


- Employment Status
- Occupation
- Usual hours worked per week
- Work experience



DOA Address Geocoded DWD SNAP

(Standard Name and Address Program)



Standard Industrial Classification

SIC Codes

North American Industrial Classification System

NAICS Codes

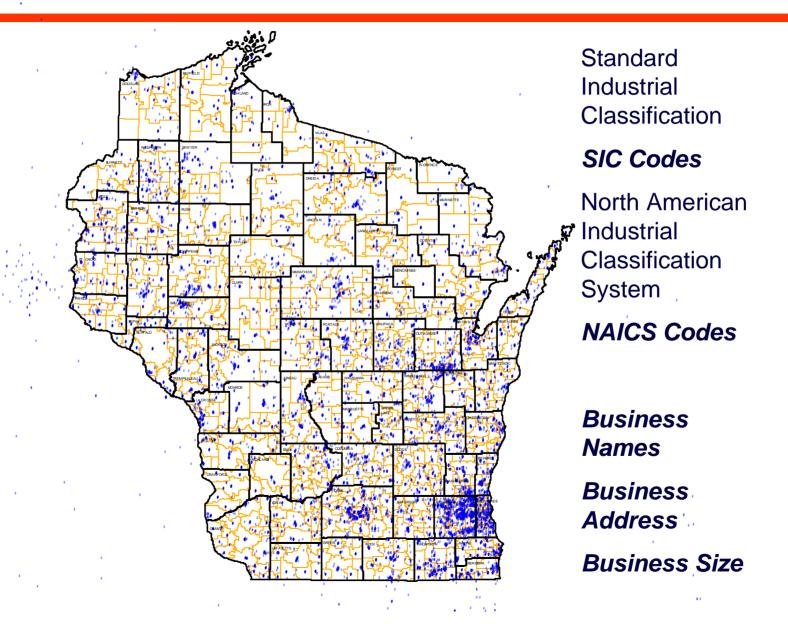
Business Names

Business Address

Business Size

DOA Address Geocoded DWD SNAP

(Standard Name and Address Program)



Data for a Comprehensive Plan

7. Intergovernmental Cooperation







A Guide to Preparing the Intergovernmental Cooperation Element of a Local Comprehensive Plan



Data available:

- School District Boundaries
- TIGER derived MCD Boundaries

Resources available:

- Intergovernmental Cooperation Guide
- Municipal Boundary Review Program

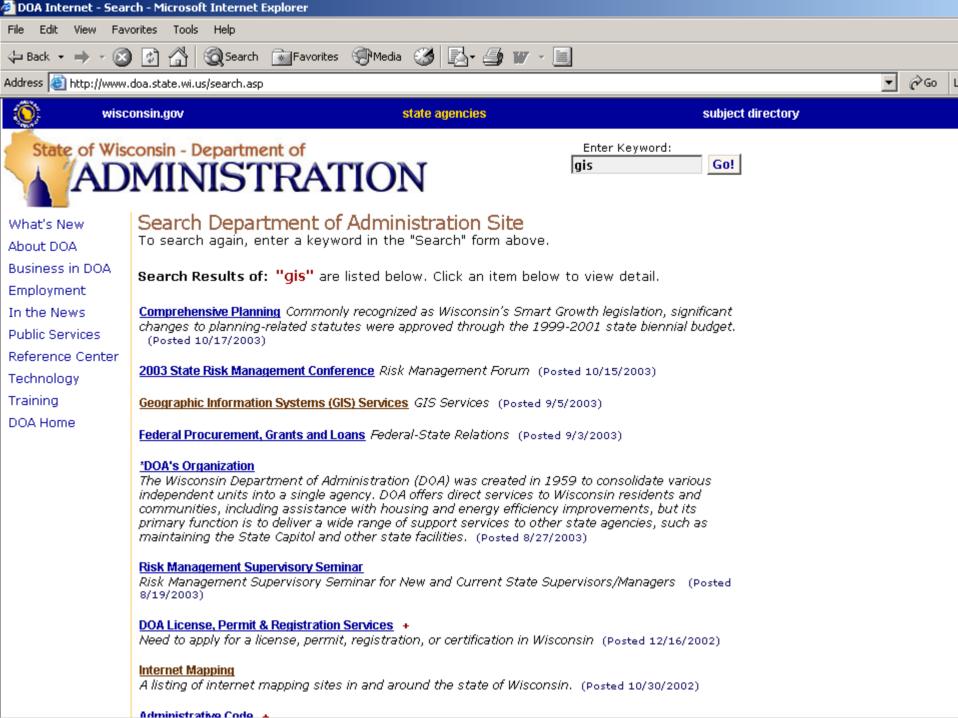
TIGER derived shapefiles in WTM83(91)

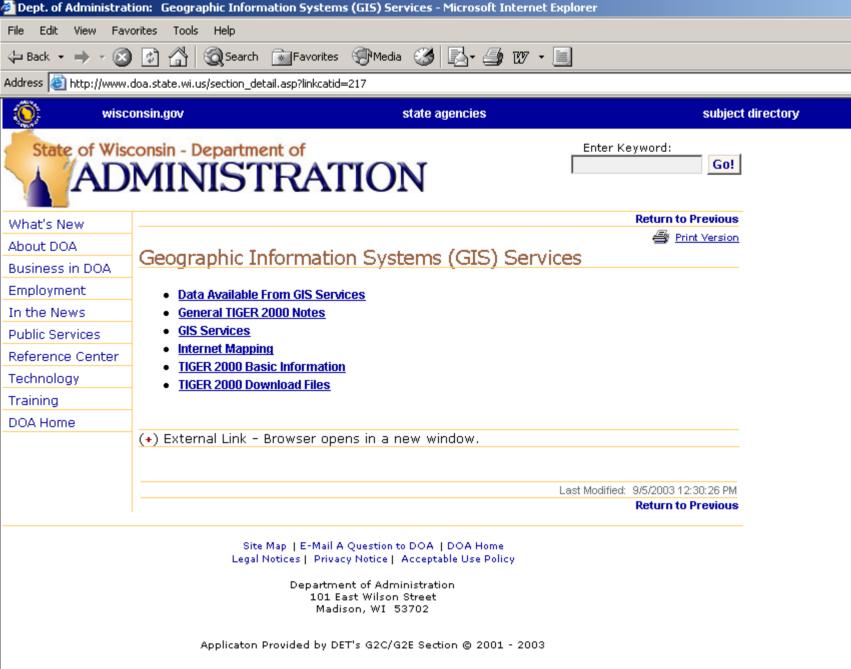
TIGER - an acronym for "Topologically Integrated Geographic Encoding and Referencing"

TIGER - an important source for consistent, statewide, attributed, documented, digital geospatial data in Wisconsin.

What do you want to do with Census / TIGER?

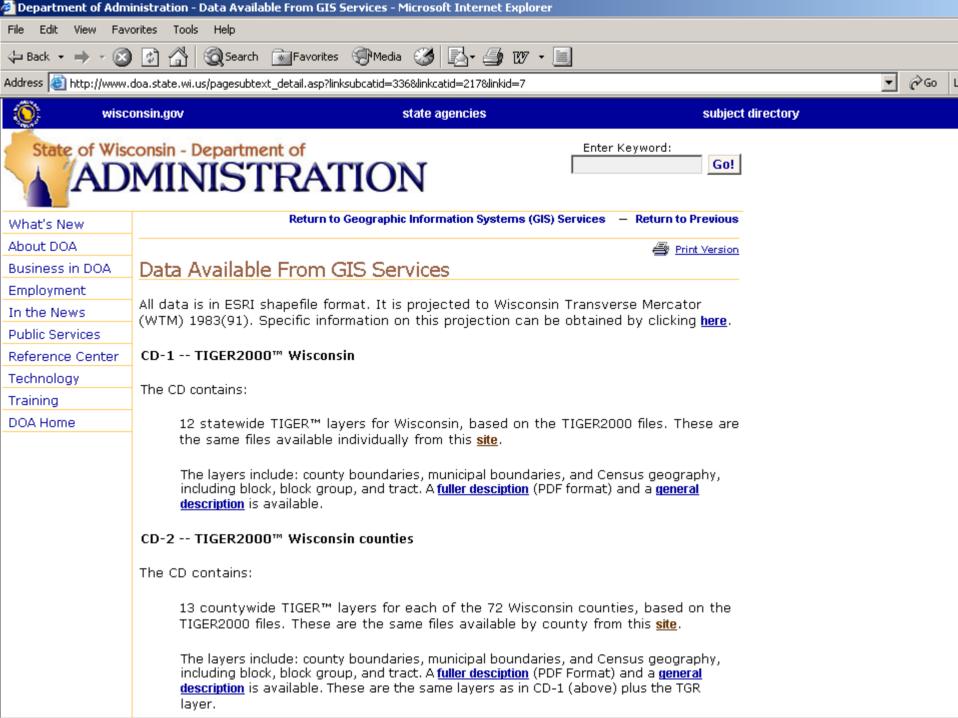
- Local Comprehensive Planning
- Thematic Mapping
- Address Geocoding
- Emergency Management
- Small Area Demographic Forecasts
- Legislative Redistricting



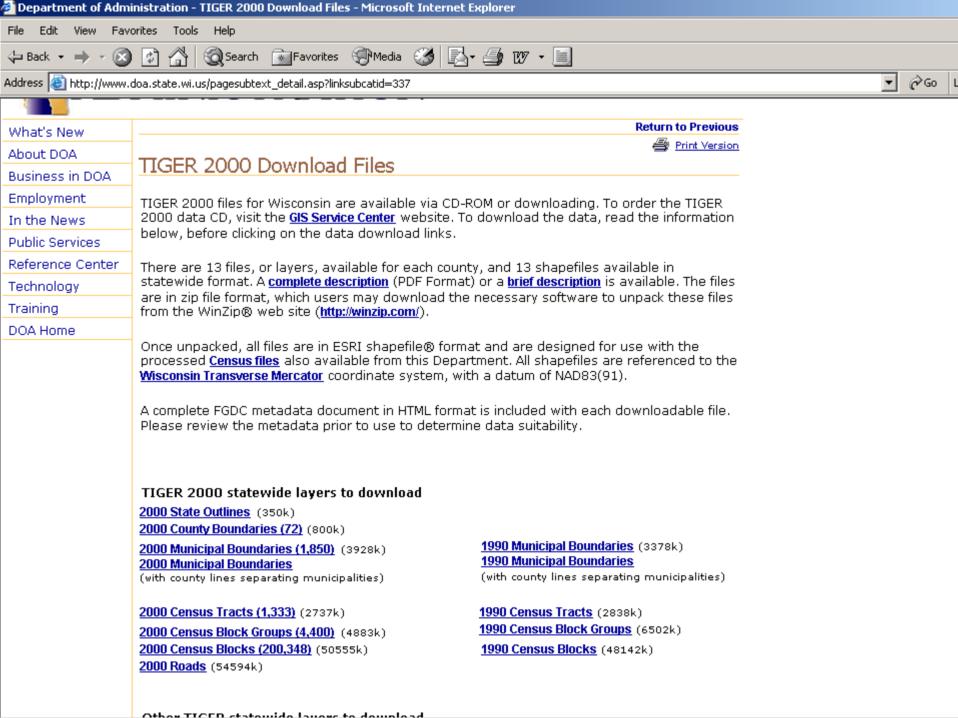


€GO.

The preferred browser for the DOA Internet is Internet Explorer 4.x or higher. The site is best seen with the screen resolution at 800 × 600 or higher



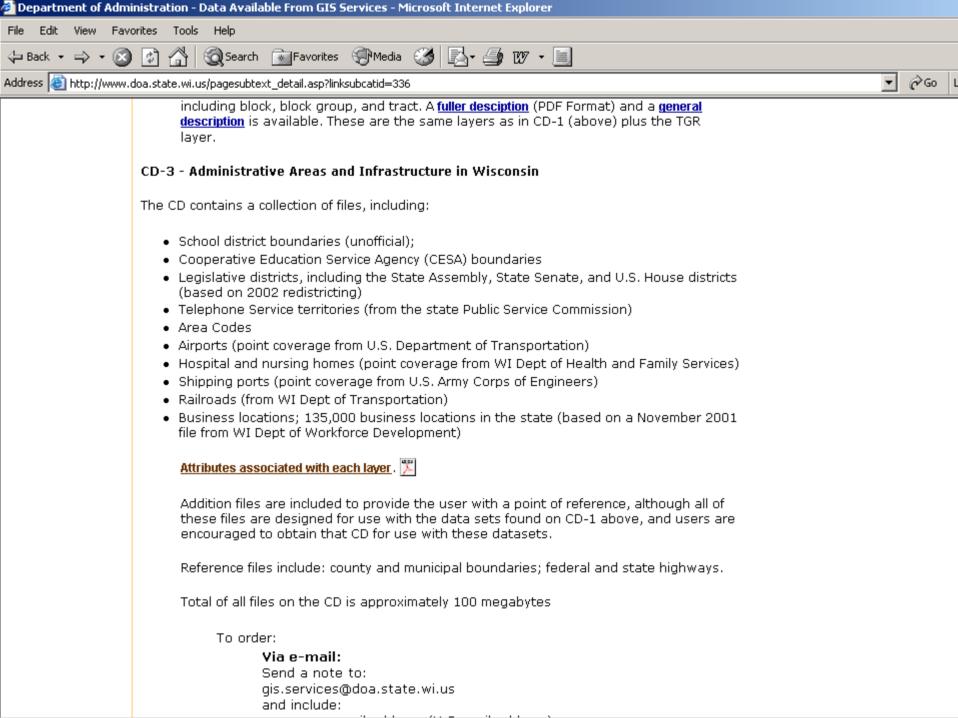




Administrative Areas and Infrastructure

CD's of geospatial data available through DOA

- School district boundaries (Census)
- Cooperative Education Service Agency (CESA) boundaries (Census)
- Legislative districts (Based on 2002 Redistricting)
- Telephone Service territories (Public Service Commission)
- Area Codes Airports (U.S. Department of Transportation)
- Hospital and nursing homes (Dept of Health and Family Services)
- Shipping ports (U.S. Army Corps of Engineers)
- Railroads (WI Dept of Transportation)
- Business locations; 140,000 locations (Dept. of Workforce Development)



DOA Geospatial Data for ArcView Users

Department of Administration Data used for ArcView Project

- TIGER 2000 derived layers
- School district boundaries (unofficial) 2000
- DWD Business locations;
 SNAP (Standard Name and Address Program) 2002

http://www.doa.state.wi.us Keyword: GIS

WISCLINC -- http://wisclinc.state.wi.us/

Location: WISCLINC Index

HOME

Data Discovery

Metadata Search
Metadata
Browser
LIO Survey
State Catalog
County Catalog

On Metadata...

Overview Tools Reference/Links Training Materials

Search/Query...

Wisconsin Search NSDI--Search

<u>Land</u> Information

Land Info.
Directory
Grant/Assistance
SCO Calendar

Clearinghouse

What's New ? About WISCLINC FAQ/Help



NEW !! 2003 SCO Metadata Workshop!

The Wisconsin Land Information Clearinghouse (<u>WISCLINC</u>) is a gateway to geospatial data and metadata, related land and reference information, and the Wisconsin agencies which produce or maintain these items. WISCLINC is also a registered node in the web of NSDI clearinghouses.

What's Inside:

To immediately begin your search of metadata/data available on this site we suggest that you try these primary methods <u>Search Spatial Metadata</u> or <u>Metadata Browser</u>. If you would like to explore additional resources related to status and availability of geospatial data in Wisconsin, please proceed to <u>Data Discovery</u>

Search Spatial Metadata Search for metadata describing geospatial data through the FGDC Clearinghouse Search or Wisconsin Custom search form based on the FGDC Search.



Browse Local Metadata & Data Browse metadata on the Wisconsin Clearinghouse through tables organized by theme, agency, or geographic region. Includes **data for download** where available.



WISCLINC -- http://wisclinc.state.wi.us/

Location: WISCLINC: Data Discovery: Metadata Browse)Г			
Browse metadata by Organization,	& Jump to	DOA	¥	
Description	Image (.gif)	Tile Size	Metadata/ FAQ	Download/ Link

Description Wisconsin State Outline (state)	Image (.gif)	Tile Size State	Metadata/ FAQ		Download
			•	(1)	•
Wisconsin County Outlines (wi_cnty)		State	•	(1)	0
Wisconsin Counties, Single-part Polygons (cntydiss)		State	1	(1)	
Wisconsin Senate Districts (senate)		State	0	1	1
Wisconsin U.S. Congressional Districts (congress)		State	0	•	•
Wisconsin Assembly Districts (assembly)		State	0	•	•
Wisconsin 1990 MCDs (wi_mcd90)		State	0	•	0
Wisconsin 1990 MCDs, "Unsplit" at the county (unmcd90)		State	0	•	0
Wisconsin 1995 MCDs (wi_mcd95)		State	0	•	1
Wisconsin 1995 MCDs, "Unsplit" at the county (unmcd95)		State	0	•	0
Wisconsin 1998 MCDs (wi_mcd98)		State	0	•	0
Wisconsin 1998 MCDs, "Unsplit" at the county (unmcd98)		State	0	•	0
Wisconsin 1998 MCDs, Single-part Polygons (wi_mcd98diss)		State	0	•	
Wisconsin Tribal Lands (tribal98)		State	0	•	0
Wisconsin Urban Areas (wi_urban)		State	0	(1)	1
Wisconsin Technical Colleges (techpts)		State	0	(1)	0
Wisconsin Secondary School Districts (schl_dis)		State	0	()	0
, Wisconsin Elementary School Districts (elem. dis)		State	A	A	A



HOME | Data Discovery | Metadata Resources | Search WISCLINC | Land Information

Last update: 16 August, 2000

Wisconsin Department of Natural Resources

Home | Search | Feedback | What's New?

DNR Geographic Information Systems (GIS)

GIS Home Who We Are Links to More Resources

Accessing DNR Data

GIS Data Overview
GIS Data Access
Data Sharing CDs
Digital Raster Graphics
(DRGs)
Hydrography Data
Landcover Data
Search Data (WLIS)

Interactive Maps

Interactive Maps
Overview
List of Interactive Maps
DNR WebView
Contacts

Location Matters

locational data global positioning system (GPS)

Land Information Integration Plan

Public Land Survey System (PLSS) Index

WTM83/91 Geo-referencing System

The Wisconsin Transverse Mercator coordinate system is based on the state's current high resolution reference network – the 1991 adjustment to the North American Datum of 1983 (WTM83/91).

- Rationale for Migration to WTM83/91 for DNR Geographic Data
- WTM83/91 Parameters

Rationale for Migration to WTM83/91 for DNR Geographic Data

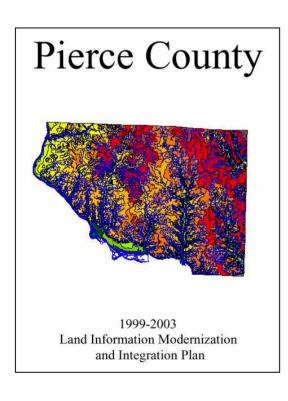
For the purposes of data integration, there are significant advantages in making all agency geographic data available for internal use in a single statewide coordinate system. This approach is intended to better enable DNR GIS users to integrate agency data sets. It also enables integration of statewide vector data with the accumulating raster data, including DRGs, DOPs, and WISCLAND land cover data.

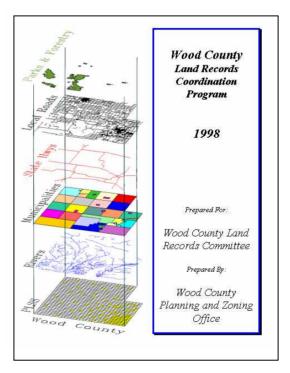
For this single geographic referencing system, the DNR has chosen a statewide Wisconsin Transverse Mercator projection/coordinate system, based on the current high-resolution reference network (the 1991 adjustment to the North American Datum of 1983). A shorthand term for the version of WTM based on the 1991 adjustment to NAD83 is "WTM83/91." The WTM coordinate system parameters to be used in conjunction with NAD83/91 are the same as those specified for use with NAD83, and are identified below.

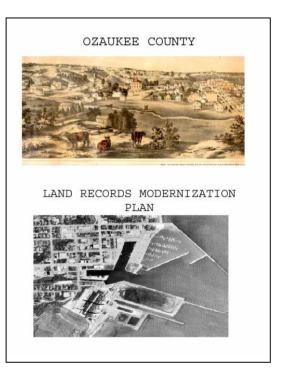
Back to Top

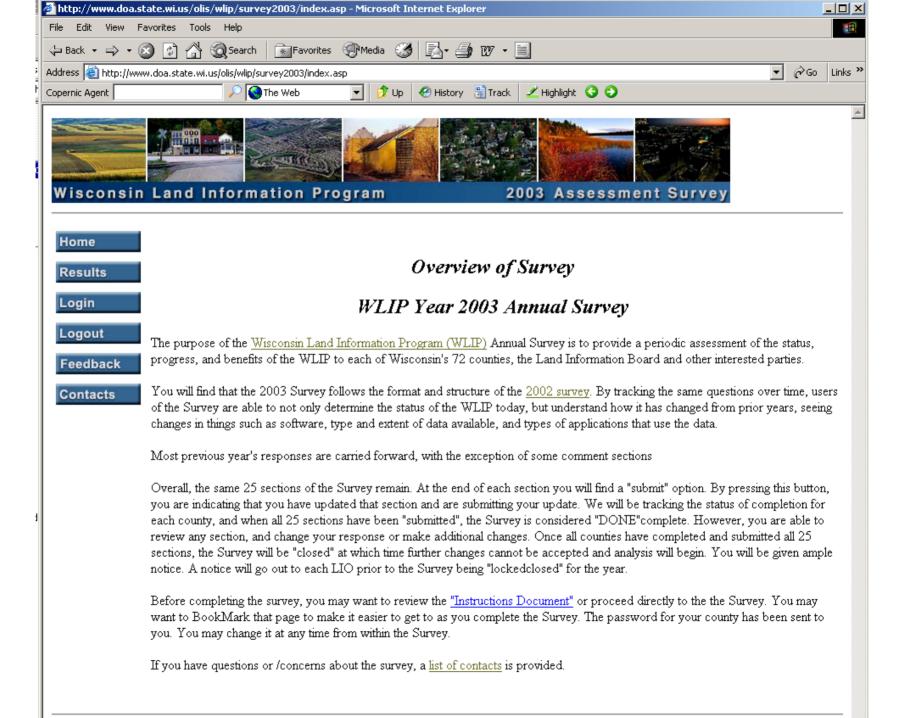
WTM83/91 Parameters

DOA hosts the County Land Information Office Land Records Modernization & Integration Plans







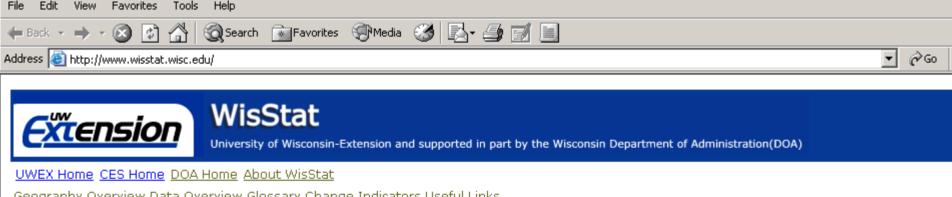


UW Applied Population Lab's WisStat

WISSTAT contains thousands of demographic and economic variables for the state of Wisconsin, its counties and municipalities.

The sources of the data include the U.S. Census Bureau and various State and Federal agencies.

http://www.wisstat.wisc.edu



Geography Overview Data Overview Glossary Change Indicators Useful Links

Help Geography View/Download

Analysis Tools

Start Over

Tables

Step 1: Select a geography.

WisStat Home Page - Microsoft Internet Explorer

Places, MCD's, Tracts, and Block Groups. When selecting MCD's, Tracts and Block Group you will also be shown a drop down box with counties to choose from. Once you have selected a level of geography and if needed a county, you will be shown a page with your choices of geographies to add. Simple check the checkbox next to each geography that you want to add and hit the Add the Geography button. Each geography that was checked will be added.

Click the geography tab. Select a level of geography that you want to select from. Your choices include State, Counties,

Click Here for a Demo of "Selecting a Geography"

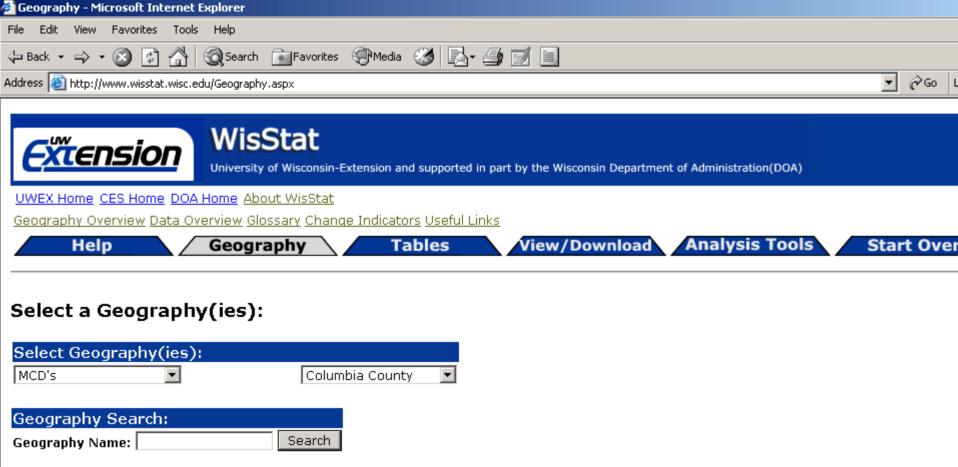
Step 2: Select a Table.

Click the Tables tab. You can look at all the tables in the database by clicking the List all tables button. You can also use one or more of the filter dropdown boxes: Source, Keyword, A Second Keyword, Year, Year Range or Subject. For example, if you were looking for tables dealing with the subject of Population but, only wanted ones that dealt with age you would select Population from the subject dropdown box and age from the Keyword dropdown and hit the button Get Tables.

For a preview of the table structure click the **View button**. A new window should appear with the layout of the table. To add tables check the box for the table or tables and press the button Add the Table(s).

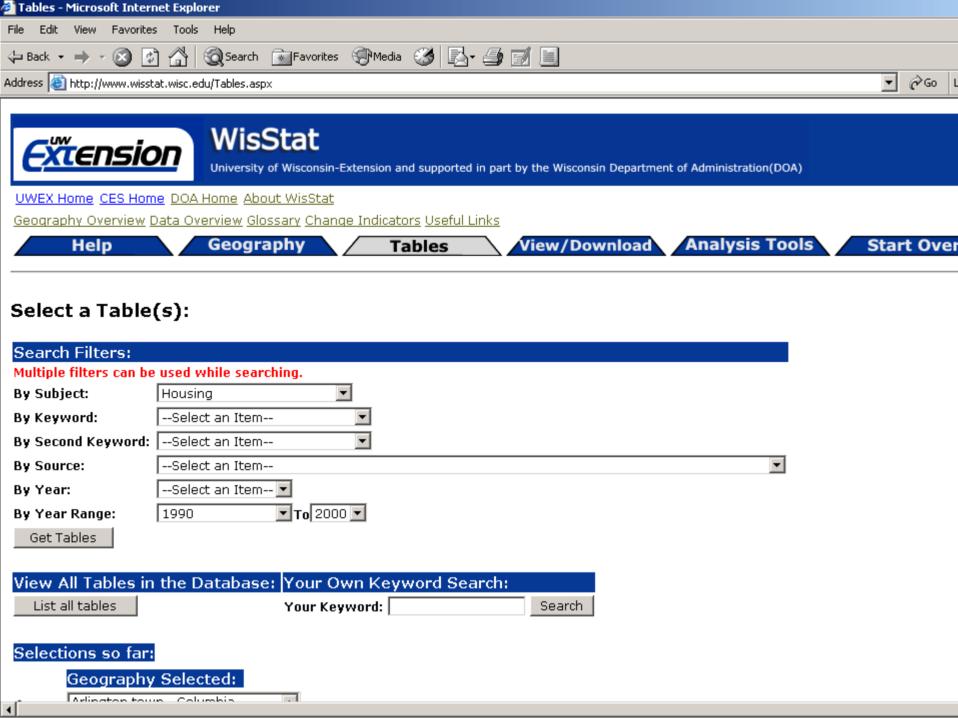
Click Here for a Demo of "Selecting a Table"

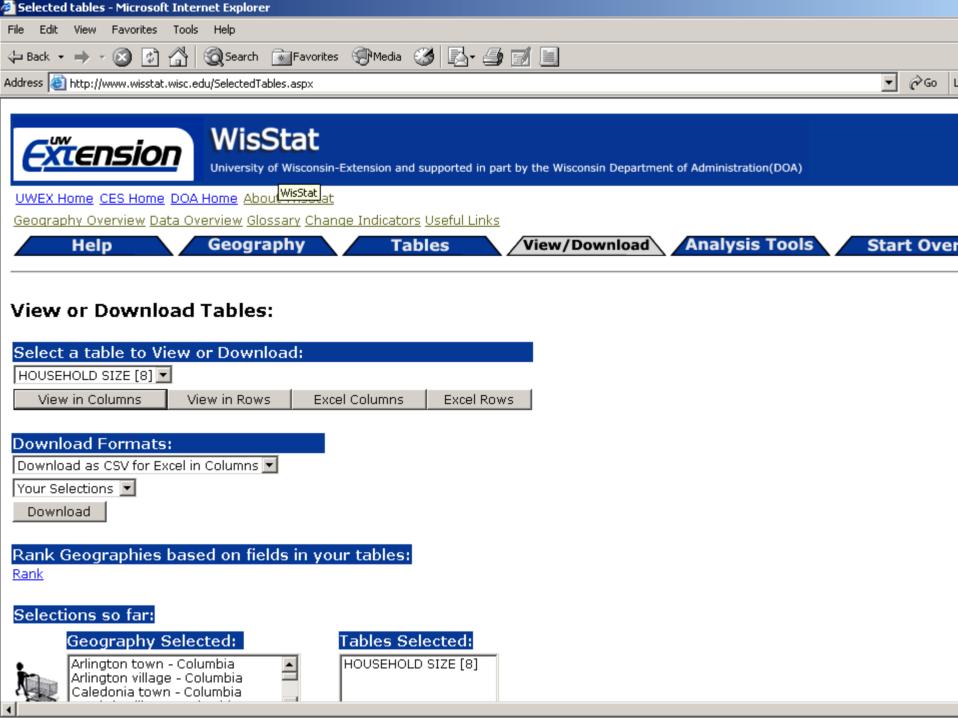
Step 3: View your Selections

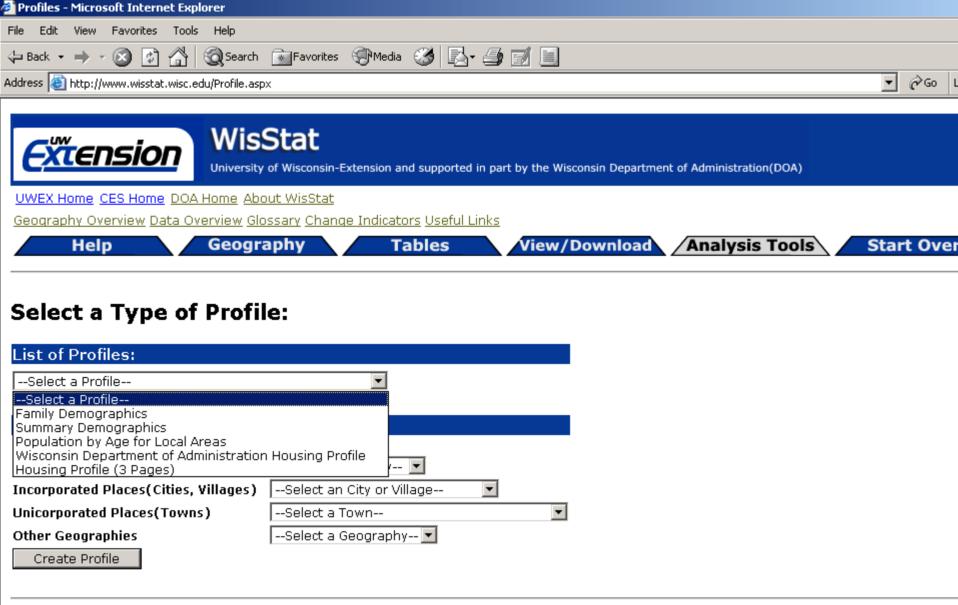


Any questions, comments, suggestions, etc., please send us an <u>E-Mail</u>

Applied Population Laboratory, Department of Rural Sociology, University of Wisconsin Madison







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Applied Population Laboratory, Department of Rural Sociology, University of Wisconsin Madison



Wisconsin, Department of Administration

Jerry Sullivan, GIS Data Specialist

Wisconsin Department of Administration
Division of Enterprise Technology
Bureau of Publishing & Distribution
101 E. Wilson St., 8th Floor, Cube 95
Madison, WI 53707-7844
(608) 264-6109

<u>jerry.sullivan@doa.state.wi.us</u>

Internet Map Servers in Wisconsin: Updated November, 2003

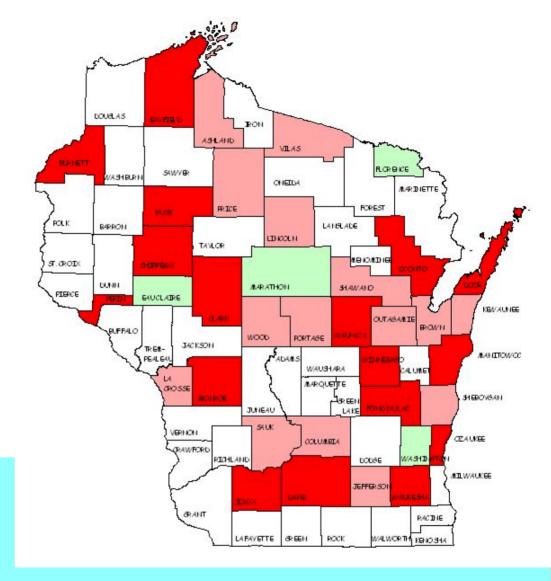
The following sites are given as examples of <u>current internet</u> mapping service development efforts.

http://www.doa.state.wi.us/docs_view2.asp?gocid=1741

County and municipal web mapping sites in Wisconsin can also be accessed at a site maintained by the University of Wisconsin Sea Grant Institute (http://coastal.lic.wisc.edu/wisconsin-ims/wisconsin-ims.htm)

County sites are also linked through the Wisconsin Land Information Clearinghouse County Catalog. (http://wisclinc.state.wi.us/datadisc/countycat.html)

WLIS will exemplify many of the best features found here. For example, the Wisconsin Metadata Explorer (http://wlis.dnr.state.wi.us/explorer/explorer.jsp) could be populated with "metadata lite" about each service. Such elements would include: Publisher, Content Title, Coverage Area, Content Type, Content Theme Keywords.





Wisconsin County and Municipal Web Mapping Sites

Many county and municipal governments in Wisconsin are developing web mapping sites. County web mapping sites can be accessed by clicking on the red counties on the map below. They will open in a separate browser window. Counties with web mapping sites in development are colored in pink and counties with intranet or subscription only web mapping sites are rendered in green.



Wisconsin Land Information System

WLIS Pilot Project

Overview

Search the Wisconsin Land Information System Pilot

Browse and Acquire Data

Contacts

Meetings

WLIS Pilot Documents

Related Sites

DNR WLIS Node

Online Interactive Maps

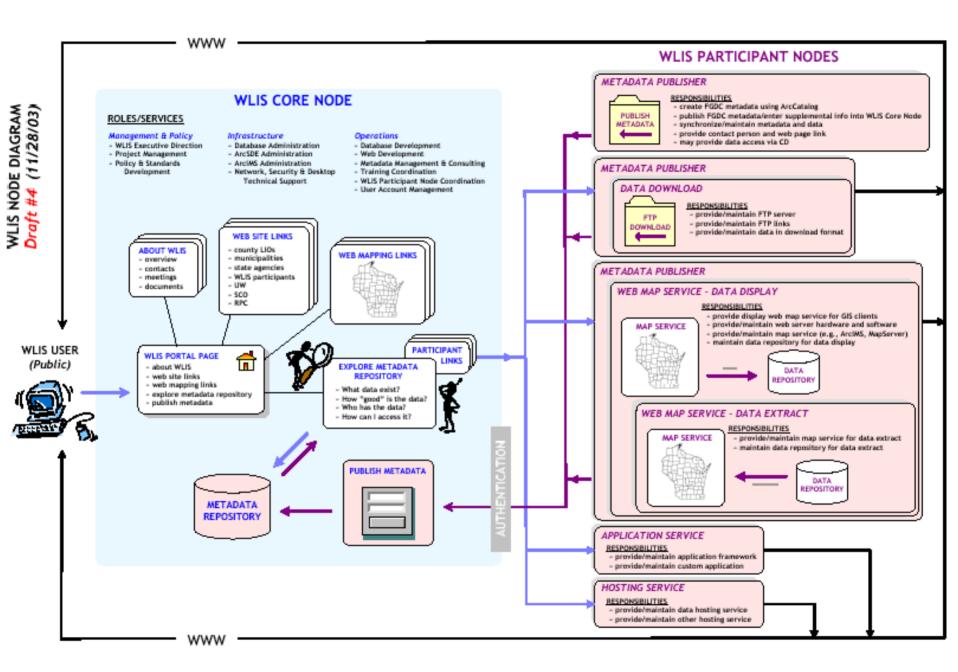
Statewide List of Interactive Maps

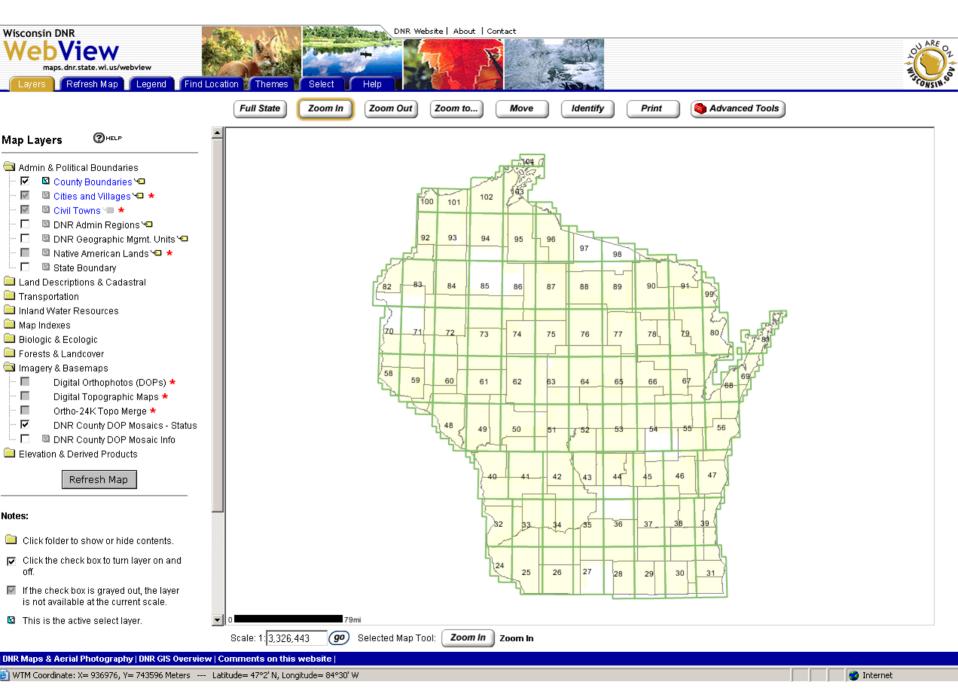
Wisconsin Land Information System Pilot Project

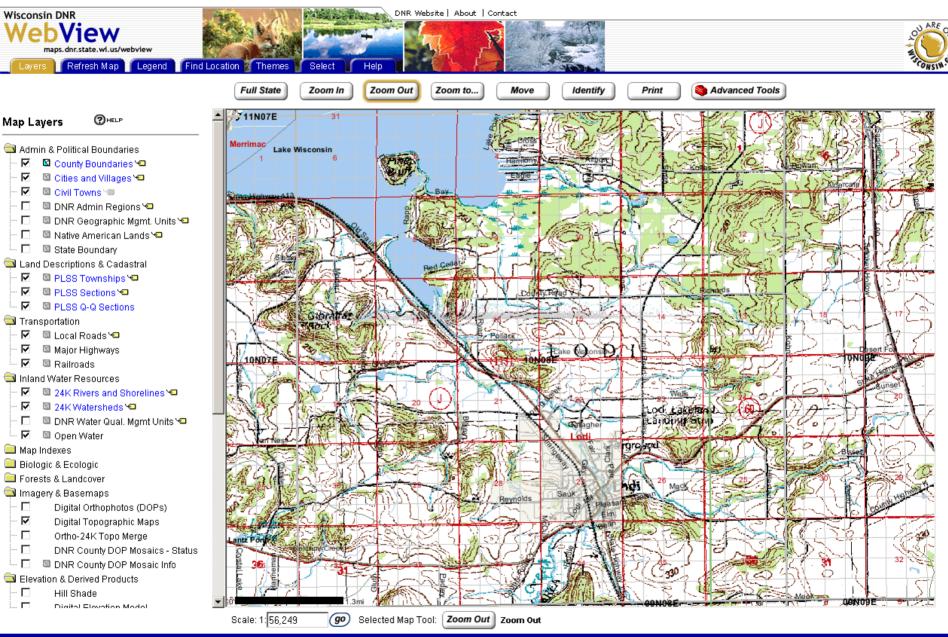
In 2002, DOA requested that DNR assist with developing and implementing some of the technological pieces needed for implementation of a Wisconsin Land Information System (WLIS). The concept and outline for WLIS was developed by a project team formed by the Wisconsin Land Council and Wisconsin Land Information Board. The WLIS project team included participants from state and local government, regional planning commissions, and the private sector.

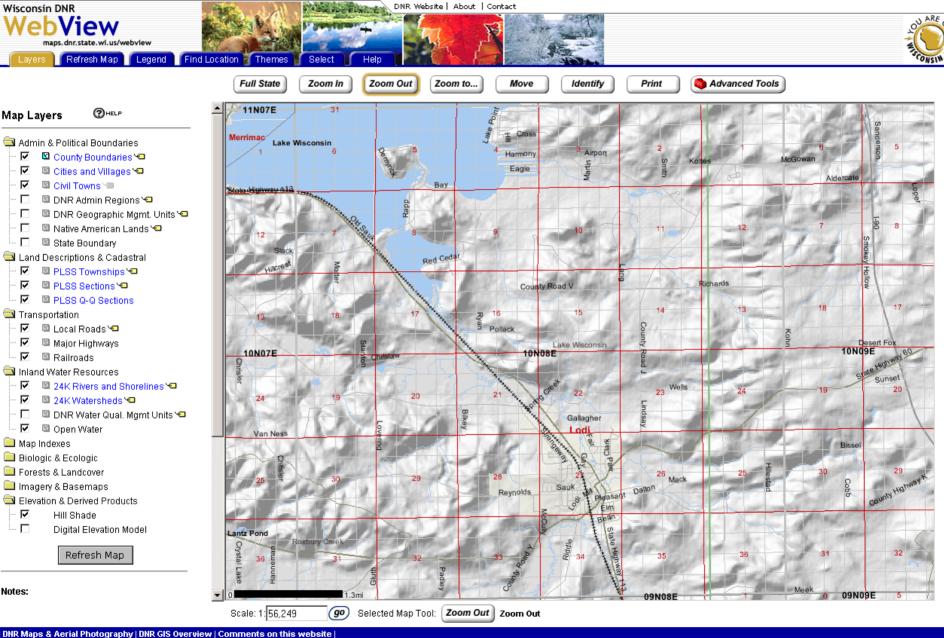
The long-term vision for WLIS identified creation of a statewide, web-based, distributed system easily accessible to the public with links to Wisconsin land-related data and information through indexing or retrieval. It would become a technical and organizational mechanism for accessing and transferring land information, supporting integrated and aggregated views of state and locally produced data, capitalizing on data already created by state agencies and local governments and other sources such as federal sources. Among other benefits, WLIS should be a means of supporting land management decision-making activities, including comprehensive land use planning.

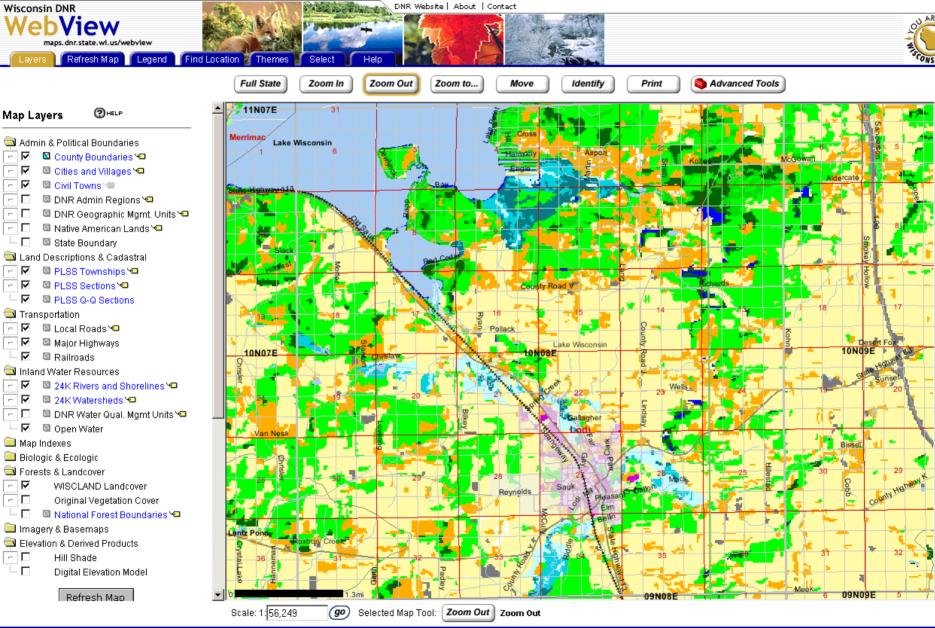
This FY03/04 cooperative project between DOA and DNR is focused on developing and implementing selected technological Internet GIS components. These components can be considered "building blocks" which will support the WLIS initiative. Efforts build upon and improve DNR's capabilities, and demonstrate feasibility of the functions identified for WLIS.

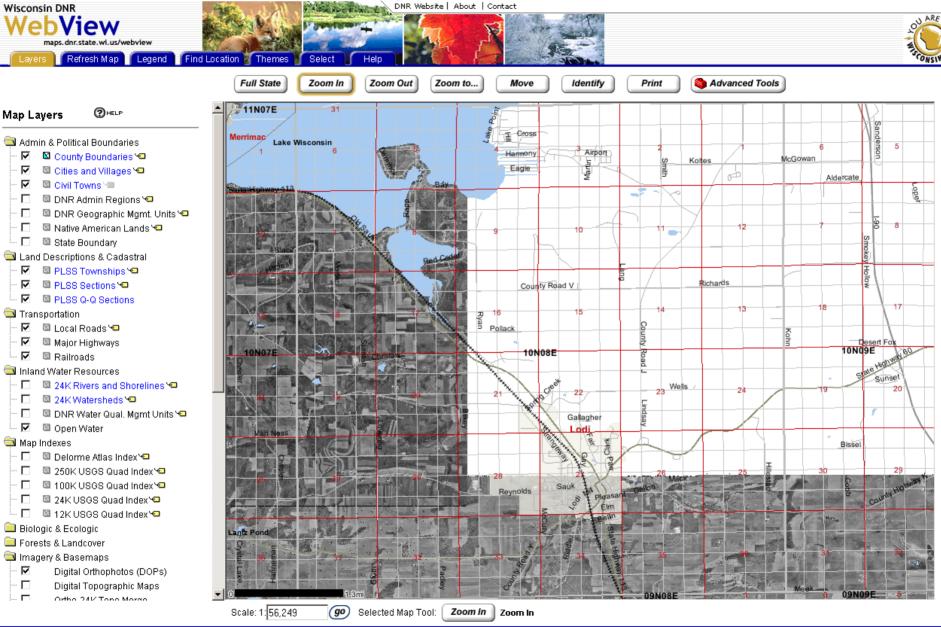


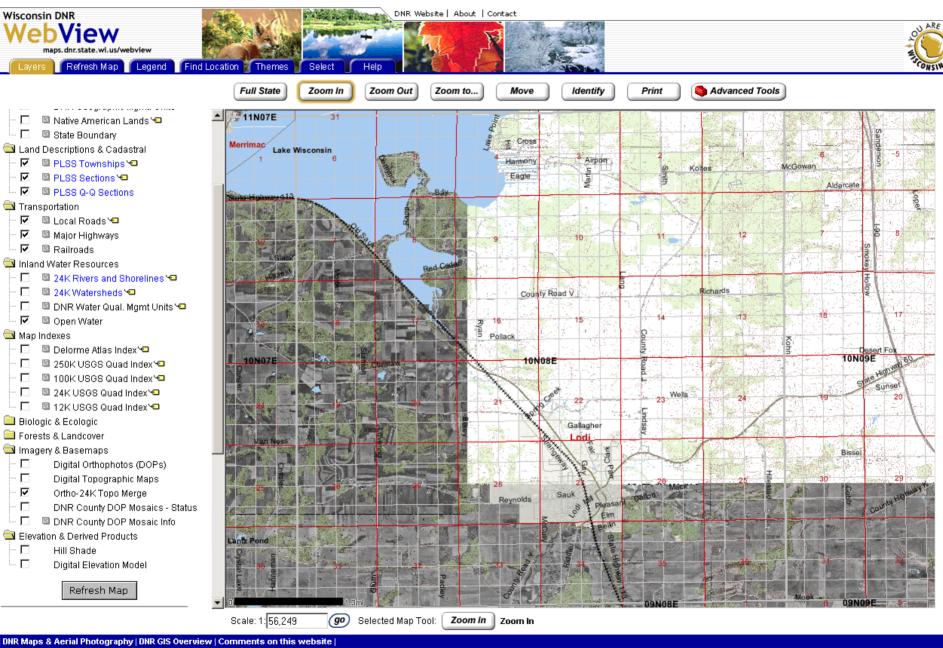


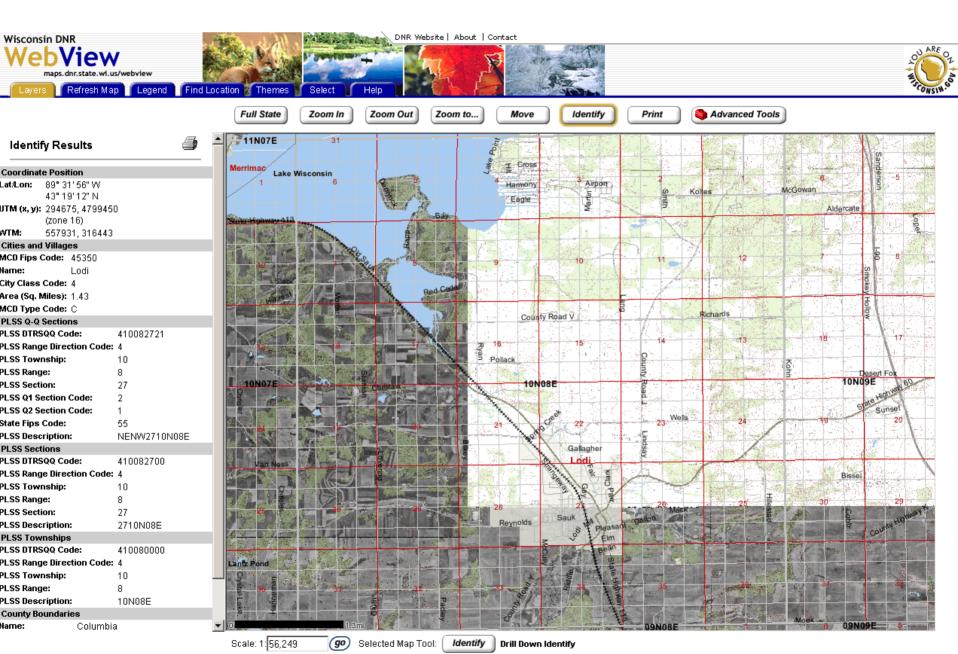


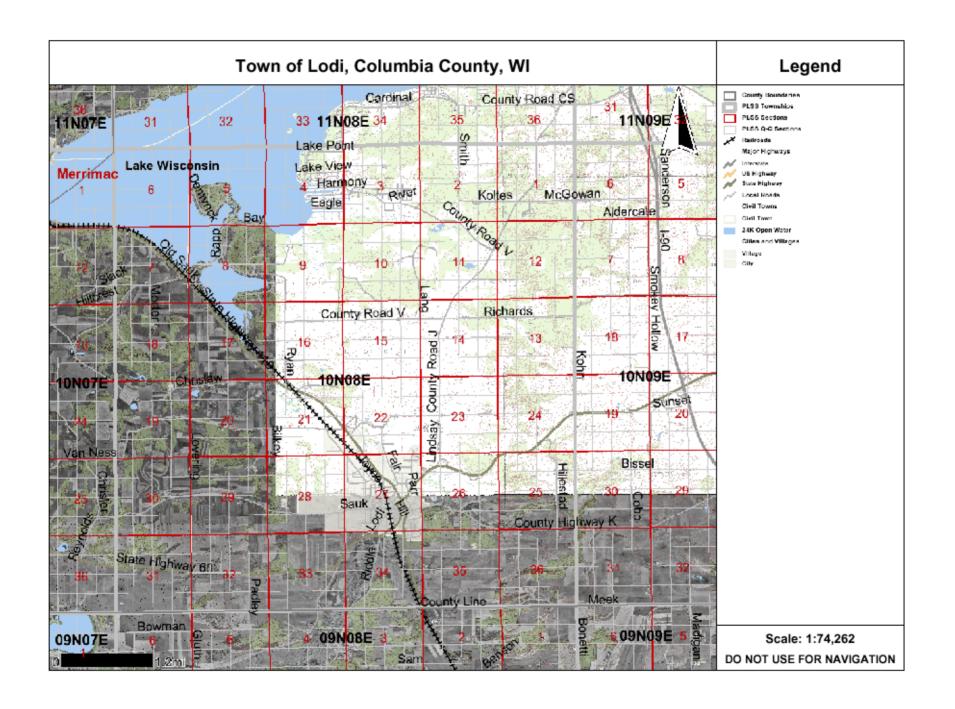
















DNR Website | About | Contact





Refresh Map

Legend

Find Location Themes

Select

Selection Set

Layer:

PLSS Q-Q Sections

Selection:

436 features selected.

Options:

Extent Zoom to the extent of all the selected features in this layer.

Clear Unselects all the selected features in this layer.

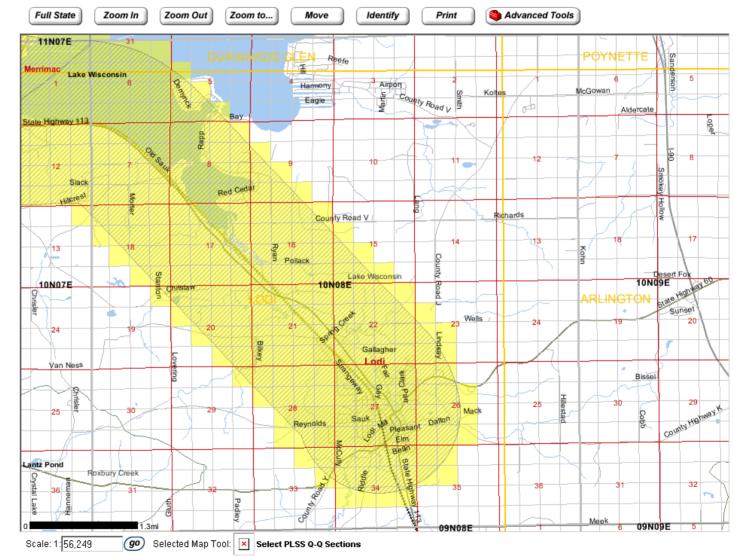
Reporting:

Execute report for this set.

Extract:

Extract selected features to a local shapefile.

This layer is defined as a selected set type of layer. You may use the selection tool to refine your selected set so that it contains the desired features before executing the reporting routines











Internet

Extract GIS Laver

The "extract" tool allows you to locate an area of interest, and then download a ESRI Shapefile for that area. Shapefiles can be used in popular GIS software packages such as ArcView, ArcMap, or ArcExplorer.

- 1. Locate your area of interest using the map navigation tools (zoom in, zoom out, pan).
- 2. From the list below, select the layer that you wish to extract to a shapefile: *

Layer Name

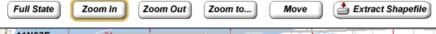
24K Open Water

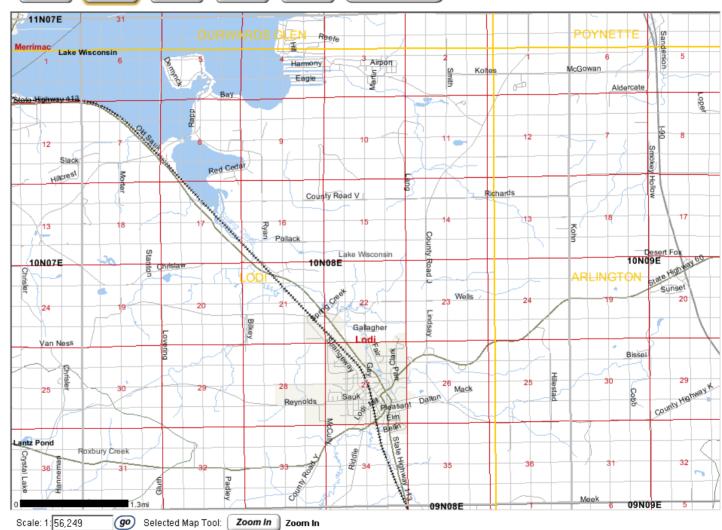
Refresh List

3. Press the OK button.

OK

* Please note: A layer must be visible on the map before it can be extracted to a Shapefile. Also, after you zoom in, it will be necessary to click on "refresh list" to refresh the list of extractable layers.







Wisconsin Land Information System Pilot

SEARCH

BROWSE





Choose content type:

<all Content Types>
Choose content theme:

<all Content Themes>
Optional Keyword (e.g. river):

3 START SEARCH

For a demonstration of the Wisconsin Land Information System Pilot:*

- Specify the location you want to search.
 - Draw a box on the map with the
 tool to define the area you want to search.
- Choose any additional search criteria.

These choices are all optional.

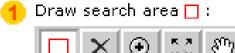
- 3 Press "Start Search"
- * This is a test site used to demonstrate the concepts behind the proposed Wisconsin Land Information System. The WLIS pilot project is NOT intended to serve as a comprehensive catalog of geospatial data in Wisconsin.



Wisconsin Land Information System Pilot

SEARCH

BROWSE





Choose content type:

Downloadable Data 🔻

Choose content theme:

Inland Water Resources

Optional Keyword (e.g. river):

3 START SEARCH

Records Found: 5

Content Found by Search

Downloadable Data

Publisher: Wisconsin Dept. of Natural

Resources (DNR)

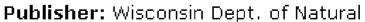
Content Title: Wisconsin DNR 2003

Watersheds

Coverage Area: Wisconsin

Map Scale: 1:24000

View Details



Resources

Content Title: Wisconsin Islands & Uplands from 1:24,000-scale sources

Coverage Area: Wisconsin

Map Scale: 1:24000

View Details



SEARCH

BROWSE

MAP

DETAILS

Wisconsin DNR WebView



Content Citation:

Title of Content: Wisconsin DNR WebView

Type of Content: Live Data and Maps (ArcIMS Image Service)

Content Wisconsin Dept. of Natural Resources (DNR)

Publisher:

Publication Mai

Madison, WI

Place:

Publication

October 2003

Date:

Content Description:

Content Summary: DNR WebView is an ArcIMS mapservice containing the most commonly requested DNR geographic data layers. The WebView service may be accessed through commercial client applications such as ArcMap or ArcExplorer, custom client applications developed with ArcObjects, or through custom-designed web applications.

Content Purpose: WebView provides remote access to datasets that might otherwise be too large and/or impractical to download and use in their entirety.



Wisconsin Land Information System

WLIS Pilot Project

Overdient

Search the Wisconsin Land Information System Pilot

Browse and Acquire Data

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Meetings

WLIS Pilot Documents

Related Sites

DNR WLIS Node

Online Interactive Maps

Statewide List of Interactive Maps

WLIS Repository Data Acquisition -- Administrative and Political Boundaries

Sort results by: Layer Name

Go!

Click on one of the data sets listed below to view your options for acquiring the data, or return to the previous page to select a different data content theme.

5 layers found, listing: 1 to 5

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Scale 1:100000

Wisconsin County Boundaries

Theme: Administrative and Political Boundaries

Wisconsin DNR-Managed Lands

Theme: Administrative and Political Boundaries Scale 1:24000.

Wisconsin DNR 2003 Deer Management Units

Theme: Administrative and Political Boundaries Scale 1:100000

Wisconsin 2000 Municipalities

Theme: Administrative and Political Boundaries Scale 1:100000

Wisconsin State Boundary - 24K

Theme: Administrative and Political Boundaries Scale 1:24000.

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WLIS Repository Data Acquisition -- Inland Water Resources

Sort results by: Layer Name



Click on one of the data sets listed below to view your options for acquiring the data, or return to the previous page to select a different data content theme.

5 layers found, listing: 1 to 5

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Wisconsin Rivers & Shorelines - 24K

Theme: Inland Water Resources

Scale 1:24000.

Wisconsin Open Water - 24K

Theme: Inland Water Resources

Scale 1:24000

Wisconsin Islands & Uplands - 24K

Theme: Inland Water Resources

Scale 1:24000.

Register of Waterbodies (ROW) Look-Up table

Theme: Inland Water Resources

Scale NA

Wisconsin DNR 2003 Watersheds

Theme: Inland Water Resources

Scale 1:24000

UW-Madison ERSC MODIS Imagery



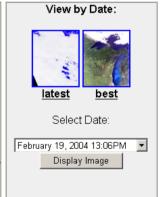


MODIS Satellite Imagery of Wisconsin

View by Catalog:

- View Monthly Catalog.
- View Full Catalog. There are currently 842 images in the archive. New images are added almost daily. We are now archiving both Aqua and Terra imagery in auto-mode when both are available through direct broadcast.
- This web site is an outgrowth of SLOI.

Merged GeoTiffs may be downloaded by following the metadata links in the catalog or viewer pages. However, downloading raw science data is not available at this time.



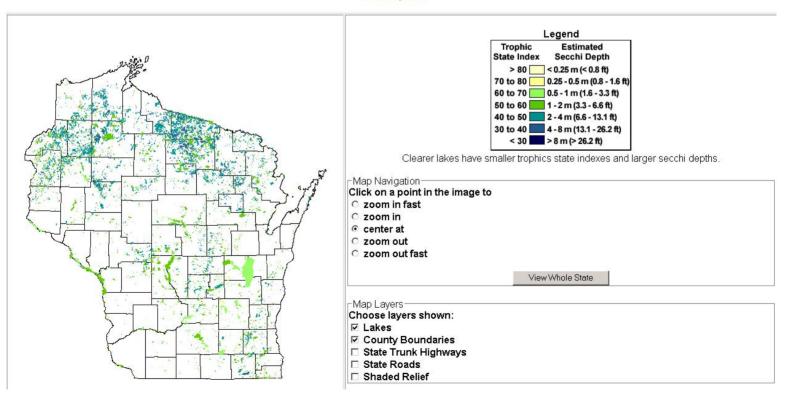
UW ERSC Lakesat Map Server



Wisconsin Lake Clarity - Trophic State

An Indicator of Lake Water Clarity Derived from Satellite Images

Find Lake by Name



NRCS Geospatial Data Gateway



For more information contact

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Wisconsin Department of Administration Division of Enterprise Technology

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Visit the DIR and DET web sites at http://www.doa.state.wi.us

